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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,154

09/25/2006

Shinji Kobayashi

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7590

06/30/2008

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EXAMINER

ALANKO, ANITA KAREN

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

06/30/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,154	<b>Applicant(s)</b> KOBAYASHI ET AL.	
	<b>Examiner</b> Anita K. Alanko	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/25/06;11/7/06;2/1/07</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “fine” is a relative term that renders the metes and bounds of the claim unclear. It may be simply deleted.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vezenov et al (US 2002/0168592 A1) in view of JP 2004-268331.

Vezenov discloses a production method of a metal mold (stamper) comprising having an uneven structure comprising:

forming a silicon-base film 62 (same as 42, [0035] such as silicon dioxide);

etching the silicon-base film with a mask 66 (Fig.5B) to form a specified shaped uneven structure pattern;

forming a metal 70 used for the metal mold on the silicon-base film with the uneven structure pattern formed thereon (Fig.5E); and

removing the silicon-base film after the uneven structure pattern is transferred to the metal used for the metal mold to form the metal mold (Fig.5F) having the uneven structure.

Vezenov fails to explicitly disclose bonding the metal to the silicon-base film. It would have been obvious to bond since bonding is a functionally equivalent technique for forming a metal layer on a base layer and expected to yield the predictable result of a metal formed on a silicon-base layer.

Vezenov fails to disclose that the silicon-base film is on a curved-surface base substrate. JP 2004-268331 teaches that processing layers 3 may be formed on curved-surface molds 2. It would have been obvious to form the silicon-base film of Vezenov on a curved-surface base substrate because JP 2004-268331 teaches that they are useful for molding optical elements.

As to claim 3, Vezenov discloses that the mask comprises photoresist 66 [0039].

As to claim 4, it would have been obvious to include a mold release material film as cited because they are conventional in the art and are expected to yield the predictable results of enabling release of the mold.

As to claim 5, Vezenov discloses silicon dioxide [0035].

As to claim 6, Vezenov teaches that there is great flexibility and varying geometries that are possible [0034]. It would have been obvious to vary the pattern as desired according to the desired final optical element to be made.

Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vezenov et al (US 2002/0168592 A1) in view of JP 2004-268331 and admitted prior art.

The discussion of Vezenov from above is repeated here.

As to claims 2 and 7, admitted prior art teaches that molding plastic with a metal mold to form an antireflection pattern is known [0003]. It would have been obvious to form an antireflection pattern since such are conventional in optical elements as taught by admitted prior art. It would have been further obvious to injection mold as cited since injection molding is a common type of molding and expected to yield the predictable result of an uneven surface.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art shows methods of forming molds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita K. Alanko whose telephone number is 571-272-1458. The examiner can normally be reached on Mon-Fri until 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anita K Alanko/  
Primary Examiner  
Art Unit 1792